Text Portion of the Notification of the First Office Action

The present invention relates to azo compound and salt thereof. After examination, the examiner's comments are as follows.

1. Claims 1-3 do not comply with Article 22(3) of the Patent Law for lack of inventive step.

Claim 1 seeks to protect an azo compound represented by the formula (1), or a salt thereof, or a copper complex compound of either of them. The reference document 1 (D1, CH326553) discloses an azo dye compound, and concretely discloses a compound (1) (cf. D1, the specification, page 1, lines 35-40, structural formula 1) (which corresponds to the compound claimed in the present claim 1 wherein B=H, R¹=-CH₃, R²=-OCH₃, R³=R⁴=-CH₃, D=-NH-, E=H, n=1 and m=0):

The differences between the compound claimed in claim 1 and the compound disclosed in D1 lies in that: (1) the substituent on the triazolyl ring of benzotrizole is different, i.e., the triazolyl ring in said claim contains a phenyl group having to 1 to 3 substituents selected from the group consisting of sulfonic acid group, amino group and etc., while the triazolyl ring in D1 is not substituted; and (2) the position of the substituent –D-E on the naphthyl ring is different, i.e., -D-E is at 6-position of the naphthyl ring in said claim, while amino group is at 7-postion of the naphthyl ring in D1. Based on the above distinguishing technical features, it can be seen that the technical problem to be actually solved by claim 1, in relative to D1, is to provide an improved azo dye compound. Meanwhile, the reference document 2 (D2, GB1484732) discloses a water-soluble azo dye, and concretely discloses an azo compound

wherein triazolyl ring in benzotriazole is substituted by 4-sulfo phenyl (cf. D2, the specification, page 6, Example 7). Clearly, D2 gives a technical inspiration with respect to that the triazolyl ring in benzotriazole may be substituted by 4-sulfo phenyl. As to the distinguishing technical feature (2), it is a common means adopted by a person skilled in the art, when screening compound, to change the position of substituent on phenyl ring or naphthyl ring. On these grounds, those skilled in the art would readily arrive at the compound claimed in claim 1 by combining D2 on the basis of the compound disclosed in D1. Hence, claim 1 neither has prominent substantive features nor represents notable progress, that is, does not possess the inventiveness as required by Article 22(3) of the Patent Law. Dependent claim 2 further defines the substituent A on the triazolyl ring. For the same reasons as above described, claim 2 does not possess the inventiveness as required by Article 22(3) of the Patent Law, either.

Claim 3, which refers to claim 1, further defines the substituents A, B, R¹, R², R³, R⁴, D and E. The definitions for the substituents B, R¹, R², R³ and R⁴ are disclosed in D1 (cf. the specification, page 1, lines 35-40, structural formula 1). With respect to the definition for the substituent A, please see the above comment on claim 1. As far as the definition for the substituent –D-E is concerned, when D is –NH-, it is a common means adopted by a person skilled in the art, when screening compound, to substitute the hydrogen atom on the amino group with a phenyl which is substituted with amino group or hydroxyl group. Clearly, it is obvious to arrive at the technical solution claimed in claim 3. Therefore, when the cited claim 1 does not involve an inventive step, claim 3 does not possess the inventiveness as required by Article 22(3) of the Patent Law, either.

2. Claims 4-6 do not comply with Article 26(4) of the Patent Law for lack of support from the specification.

Claim 4 seeks to protect the azo compound as set forth in claim 1, or a salt thereof, or a copper complex compound of either of them. Firstly, the present specification only discloses the preparation of the concrete compounds given in Examples 1-8, without mentioning their copper complex compounds. Secondly, although the specification lists on pages 18-19 the copper complex compounds of two concrete compounds, it does not disclose the preparation of said two concrete compounds. Further, as can be seen from the structures of said two copper complex compounds, a copper complex compound can be formed only when two adjacent phenyl rings in the compound both contain hydroxyl group at the same side. However, the concrete compounds prepared in Examples 1-8 do not have such a structure. On this ground, a person skilled in the art will question the possibility that the concrete compounds prepared in Examples 1-8 may complex with copper to obtain the corresponding copper complex compounds. Clearly, claim 4 is not supported by the specification with respect to the copper complex compound of the azo compound, and thus does not comply with Article 26(4) of the Patent Law. Claims 5 and 6, which seek to protect a dye type polarizing film, are not supported by the specification with respect to the copper complex compound contained therein, either. Thus, clams 5 and 6 do not comply with Article 26(4) of the Patent Law.

3. Claim 8 does not comply with Rule 20(1) of the Implementing Regulations of the Patent Law.

Claim 8, which seeks to protect "the dye type polarizing film as set forth in any one of claims 5-7, which is used for a liquid crystal projector", is a product claim defined with use. However, this use definition does not change the structure and/or composition of the polarizing film. Clearly, claim 8 is a claim that is of the same category and has substantially same extent of protection as any one of claims 5-7, which renders the claims not concise as a whole. Thus, claim 8 does not comply with Rule 20(1) of the Implementing Regulations of the Patent Law.

Due to the above reasons, the present application cannot be allowed based on the present text. If the applicant fails to submit sufficient reasons to prove that the application does have patentability and/or submit the amended application documents capable of overcoming all aforesaid defects within the time limit specified in the Notification, the application will be rejected. The applicant is

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reminded that the amendments to the application documents should comply with Article 33, i.e., the amendments should not go beyond the scope of the disclosure contained in the initial specification and claims.

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